

# MATERIAL SAFETY DATA SHEET

## SECTION I: GENERAL INFORMATION

Foster Dixiana Corporation  
Post Office Box 2005  
Columbia, South Carolina 29202

Date of Latest/Review:  
01/01/2000

Production Information Telephone: 803-791-3129  
Medical Emergency Telephone: 803-791-3129

## SECTION II: HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

Hazardous Components:	Crystalline Silica, Quartz (respirable)
Specific Chemical Identity:	Silicon Dioxide SiO <sub>2</sub> (CAS 14808-60-7)
Common Names:	Silica sand, Crystalline Silica, Quartz
FDC Trade Names:	Filtration, Playsand, Bank, Traction, Blast-Sands common to All Building, Golf Course and Foundries

OSHA PEL (Permissible Exposure Limit):  
Exposure to respirable crystalline silica, quartz, shall not exceed an 8-hour time-weighted limit  
As stated in MSHA Standards, Subpart D, Section 56.5001 on air quality specifically "Silica:  
Crystalline: Quartz (respirable) PEL - TWA = 0.1 mg/m<sup>3</sup>

Crystalline: Quartz (respirable) PEL - 10mg/m<sup>3</sup> [29CFR 1910.1000] %SiO<sub>2</sub>+2

ACGIH TLV (Threshold Limit Value):  
Crystalline Quartz  
TLV - TWA = 0.1mg/m<sup>3</sup>(Respirable Dust)  
American Conference of Governmental Industrial Hygienists. (Latest edition)

Other limits Recommended: National Institute for Occupational Safety and Health (NIOSH). Recommended standard maximum permissible concentration = 0.05 mg/m<sup>3</sup> (respirable free silica) as determined by a full-shift sample up to 10-hour working day, 40-hour week. See NIOSH Criteria for a Recommended Standard Occupational Exposure to Crystalline Silica.

## SECTION III: PHYSICAL CHEMICAL CHARACTERISTICS

Boiling Point:	4046°F, 2230°C	Specific Gravity (H <sub>2</sub> O=1):	2.65
Vapor Pressure(mm HG.):	None	Melting Point:	3000°F, 1710°C
Vapor Density (AIR = 1):	None	Evaporation Rate: (Butyl Acetate =1)	None
Solubility in Water:	Insoluble		
Appearance & Odor:	White or tan sand, granular - no odor or taste.		

## SECTION IV: FIRE AND EXPLOSION HAZARD DATA

Flash Point:	Nonflammable, does not flash.
Flammable Limits:	None
LEL: None	UEL: None
Extinguishing Media:	Will not burn, may be used to extinguish fires.
Special Fire Fighting Procedure:	N/A
Unusual Fire and Explosion Hazards:	None

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## SECTION V: REACTIVITY DATA

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Stability:	Stable
Conditions to Avoid:	None
Materials to Avoid:	CFL*3, MNF*3, OF*2
Hazardous Decomposition or Byproducts:	None
Hazardous Polymerization:	Will not occur

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## SECTION VI: HEALTH HAZARD DATA

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Route(s) of Entry: Inhalation?	Yes	Skin?	No	Ingestion?	Yes
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Health Hazard (Acute and Chronic): Excessive inhalation of dust may result in respiratory disease, including Silicosis, pneumoconiosis and pulmonary fibrosis. Acute or rapidly developing silicosis may occur in a short period of time in heavy exposure in certain occupations such as sandblasters. Silicosis is a form of disabling pulmonary fibrosis which can be progressive and may lead to death. Be sure to maintain current physicals.

Cancer Status: The International Agency for Research on Cancer has determined that crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is carcinogenic to humans (Group 1 - carcinogenic to humans). Refer to IARC Monograph 68, Silica, Some Silicates and Organic Fibres (published in June 1997) in conjunction with the use of these materials. The National Toxicology Program classifies respirable crystalline silica as "reasonably anticipated to be a carcinogen".

Signs and Symptoms of Exposure: Prolonged exposure to respirable silica may cause diminished lung capacity with shortness of breath during physical exertion and cause undue breathlessness, wheezing, cough and sputum production.

Medical Conditions Generally Aggravated by Exposure: Individuals with pulmonary or respiratory disease such as asthma, bronchitis and emphysema should avoid prolonged exposure of silica dust. Pulmonary function may be reduced by inhalation of respirable crystalline silica. Also lung scarring produced by such inhalation may lead to a progressive massive fibrosis of the lung which may aggravate other pulmonary conditions and diseases and which increases susceptibility to pulmonary tuberculosis. Progressive massive fibrosis may be accompanied by right heart enlargement, heart failure, and pulmonary failure. Smoking aggravates the effects of exposure.

Emergency and First Aid Procedures: Eyes - wash eyes with large amounts of water, obtain medical attention if irritation persists. Extensive Inhalation - remove to an area of fresh air. Seek medical attention for treatment observation and support as needed.

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## SECTION VII: PRECAUTIONS FOR SAFE HANDLING AND USE

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Steps To Be Taken In Case Material Is Released Or Spilled: Clean up by approved dustless methods (water or vacuum); put in closed container (note: do not use air or dry sweep). Use approved NIOSH or MSHA respirators for dust (29 CFR 1910.134) as noted below.

Waste Disposal Method: If uncontaminated, dispose as an inert, nonmetallic mineral. If contaminated, use appropriate method in light of contamination in accordance with Federal, State, and Local Laws.

Precaution To Be Taken in Handling and Storing: Avoid spillage. Use dustless systems for handling and employ engineering controls to reduce concentration of airborne dust. (Example: an approved bag house)

Other Precaution: Post warning signs to keep all persons alerted to dusty areas. Use dustless systems for handling storage and clean up so that airborne dust does not exceed the PEL (Permissible Exposure Limit). Use adequate

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## SECTION VII: PRECAUTIONS FOR SAFE HANDLING AND USE (con't)

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ventilation and dust collection. Practice good housekeeping. Maintain clean and fit, test respirators in accordance with OSHA regulations. See control measures in Section VIII.

See OSHA Hazard Communication Rule 29 CFR sections 1910.1200, 1915.99, 1917.28, 1926.59 and 1928.21 and state and local worker or community "right to know" laws and regulations. We recommend that smoking be prohibited in all areas where respirators must be used. **WARN YOUR EMPLOYEES (AND YOUR CUSTOMER USERS IN CASE OF RESALE) BY POSTING AND OTHER MEANS OF THE HAZARD AND OSHA PRECAUTIONS TO BE USED. PROVIDE TRAINING FOR YOUR EMPLOYEES ABOUT OSHA PRECAUTIONS.**

See, also, American Society for Testing and Materials (ASTM) standard practice E1132.86, "Standard Practice for Health Requirements Relating to Occupational Exposure to Quartz Dust."

See, also, the most recent standards of the American National Standard Institute (ANSI Z88.2), and the Mine Safety and Health Administration (MSHA) (30 CFR Part 56).

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## SECTION VIII: CONTROL MEASURES

**Respiratory Protection:** Use appropriate respiratory protection for respirable particulates based on consideration of airborne workplace concentrations and duration of exposure arising from intended end use. Refer to the most recent standards of ANSI (Z88.2), (29 CFR 1910.134), MSHA (30 CFR Parts 56 and 57) and NIOSH Respirator Decision Logic.

**Ventilation:** Local Exhaust - when possible to meet PEL Standards, Special - And approved Wet Scrubber Mechanical - An Approved bag-house.

**Eye Protection:** Safety glasses or goggles recommended at all times.

**Hands:** Protective gloves recommended.

**Work/Hygienic Practices:** Avoid creating and breathing dust.

**Other Protective Equipment/Clothing:** Use NIOSH or MSHA approved dust respirators. Dusty clothing should be laundered before reuse.

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